

Page 12, line 4, cancel "41" and replace it with --31--;  
line 12, insert "/" after -- 31 --.

Page 13, lines 6 and 8, change "51" to -- 52 --.

Page 14, line 12, cancel -- between --.

Page 15, lines 15 and 17, cancel "52" and replace it with  
-- 53 --.

Page 17, line 17, cancel "brackets" and replace it with  
-- members --.

Page 18, line 4, replace "position" with -- positions --;  
line 15, cancel "55" and replace it with -- 66 --.

Page 20, line 9, cancel "32" and replace it with --31--.

**IN THE CLAIMS:**

13. (Amended) The circular saw as defined in claim 12  
wherein:

said first lock means includes a first fixing member  
operable to fix said saw unit in position relative to said table  
in the horizontal direction, a first actuator coupled to the  
first fixing member, said first actuator causing [for operating]  
said first fixing member to move between a locked position and  
an unlocked position, and a first sensor means for detecting the  
vertical movement of said saw unit coupled to said first  
actuator; and

said second lock means includes a second fixing member

operable to fix said saw unit in position relative to said table in the vertical direction, a second actuator coupled to the second fixing member, said second actuator causing [for operating] said second fixing member to move between a locked position and an unlocked position, and a second sensor means for detecting the horizontal movement of said saw unit coupled to said second actuator.

14. (Amended) The circular saw as defined in claim 13 wherein:

731  
Coul  
said support means includes a support arm mounted on said table[,] and a slide [member] shaft coupled to the support arm, whereby the slide shaft can slide horizontally [slidable] relative to said support arm, and a hinge means coupling the slide shaft to the saw unit, whereby the slide shaft can pivot vertically relative to said saw unit [for vertically pivotally connecting said saw unit to said slide member];

said first fixing member of said first lock means is operable to fix said slide [member] shaft in position relative to said support arm, and said first sensor means [is operable to detect the] detects vertical pivotal movement of said saw unit relative to said slide [member] shaft; and

said second fixing member of said second lock means is operable to fix the pivotal position of said saw unit relative

to said slide [member] shaft, and said second sensor means [is operable to detect the] detects horizontal [pivotal] movement of said saw unit relative to said support arm.

15. (Twice Amended) The circular saw as defined in claim 14 wherein:

said slide [member comprises a slide] shaft is slidably [inserted into] received in a holder provided on said support arm;

said first fixing member comprises a first screw inserted into a first threaded hole formed in said holder in a direction perpendicular to an axial direction of said slide shaft, said first screw having one end that can abut said slide shaft;

said first actuator [serves] is adapted to rotate said first screw in both clockwise and counterclockwise directions so as to move said first screw toward and away from said slide shaft;

said second fixing member comprises a second screw inserted into a second threaded hole formed in said saw unit in a direction parallel to the pivotal axis of said saw unit;

[said slide shaft having] and wherein the circular saw further comprises a flange portion [that includes] having an abutting surface extending within a plane perpendicular to the pivotal axis of said saw unit, and is disposed such that one end

B2

B1  
could

of said second screw can abut said abutting surface of said flange portion; and

said second actuator [serves] is adapted to rotate said second screw in both clockwise and counterclockwise directions so as to move said second screw toward and away from said abutting surface.

In claim 17, line 4, please replace "one of said slide shaft or said saw unit" with --either said slide shaft or said saw unit--.

18. (Amended) An apparatus comprising:

a table,

a saw blade coupled to the table, the saw blade being movable at least in a horizontal direction relative to the table and a vertical direction relative to the table and

at least one lock selected from the group consisting of a first lock and a second lock, wherein:

the first lock [can] is coupled to the table and the saw blade, wherein the first lock can be operated to prevent the saw blade from moving in the horizontal direction relative to the table when the saw blade is moving in the vertical direction and

the second lock [can] is coupled to the table and the saw blade, wherein the second lock can be operated to prevent the

232  
Coulia

saw blade from moving in the vertical direction relative to the table when the saw blade is moving in the horizontal direction.

22. (Amended) An apparatus as in claim 21, further comprising:

a support arm mounted on the table and coupled to the saw blade,

a slide [member] shaft coupled to the support arm, whereby the slide shaft can slide horizontally [slidable] relative to the support arm and

a vertically pivotable hinge coupling said saw blade to the slide shaft [member], wherein:

the first sensor can detect vertical pivotal movement of the saw blade relative to the slide [member] shaft and the first lock can fix the slide [member] shaft in a position relative to the support arm in response to detection of vertical pivotal movement and

the second sensor can detect horizontal [pivotal] movement of the saw blade relative to the support arm and the second lock can fix the saw blade in a position relative to the slide [member] shaft in response to detection of horizontal [pivotal] movement.

23. An apparatus as in claim 22 wherein:

the [slide member comprises a] slide shaft is slidably [inserted into] received in a holder [provided on] connected to the support arm,

the first lock comprises a first screw inserted into a first threaded hole formed in the holder in a direction perpendicular to an axial direction of the slide shaft, the first screw having one end that can abut the slide shaft, wherein the first screw is coupled to the first actuator and the first actuator can rotate the first screw in both clockwise and counterclockwise directions so as to move the first screw toward and away from the slide shaft,

the second lock comprises a second screw inserted into a second threaded hole formed in the saw unit in a direction parallel to the vertical pivotal axis of the [saw unit] apparatus,

[the slide shaft having] and wherein the apparatus further comprises a flange portion [that includes] having an abutting surface extending within a plane perpendicular to the vertical pivotal axis of the saw blade, and is disposed such that one end of the second screw can abut the abutting surface of the flange portion and wherein the second screw is coupled to the second actuator and the second actuator can rotate the second screw in both clockwise and counterclockwise directions so as to move the second screw toward and away from the abutting surface.

24. (Amended) An apparatus as in claim 23 further comprising:

a first dust cover mounted on the holder so as to cover the first actuator and the first screw, whereby [and protecting] the first actuator and the first screw are protected from the outside environment and

a second dust cover [covering] disposed over the saw blade so as to cover the second actuator and the second screw, whereby [and protecting] the second actuator and the second screw are protected from the outside environment.

25. (Amended) An apparatus as in claim 24 further comprising:

a first detector plate mounted on [one of] either the slide shaft or the [saw blade] support arm, wherein the first sensor is a first optical sensor mounted on the other of the slide shaft [and] the [saw unit] support arm, the first detector plate having a plurality of first parallel identification bars that are spaced from each other by predetermined distances, and the first sensor is disposed in relation to the first detector plate such that the first sensor can detect movement of the first parallel identification bars as a change in a reflected light pattern and

a plurality of second parallel identification bars marked

7331d  
concluded

on the slide shaft, wherein the second sensor is a second optical sensor coupled to the holder, the second parallel identification bars are spaced from each other by predetermined distances in a longitudinal direction of the slide shaft and the second optical sensor is disposed in relation to the second parallel identification bars such that the second sensor can detect movement of the second parallel identification bars as a change in a reflected light pattern.

Please add the following new claims:

734  
Aug C157

26. An apparatus comprising:

a table having a surface for placing a workpiece thereon,  
a saw having a saw blade,

a first means for axially displacing the saw relative to the table, such that the saw can move in a horizontal plane that is parallel to the surface of the table, the first means coupled to the table and the saw,

a second means for vertically pivoting the saw relative to the table, such that the saw can move in a vertical plane relative to the surface of the table, the second means coupled to the table and the saw,

a first lock coupled to the first means and being operable to automatically prevent horizontal movement of the saw when the



saw is pivotally moving in the vertical plane and

a second lock coupled to the second means and being operable to automatically prevent vertical pivotal movement of the saw when the saw is moving in the horizontal plane.

27. An apparatus as in claim 26 wherein the first lock comprises a first screw that can fix the saw in position relative to the table in the horizontal plane.

28. An apparatus as in claim 27 further comprising:

a first sensor disposed on the saw, wherein the first sensor detects pivotal movement of the saw in the vertical plane and

a first actuator coupled to the first sensor and the first screw, wherein the first actuator rotates the first screw in response to detection by the first sensor of pivotal movement of the saw in the vertical plane.

29. An apparatus as in claim 28 wherein the second lock comprises a second screw that can fix the saw in position relative to the table in the vertical plane.

30. An apparatus as in claim 29 further comprising:

a second sensor disposed on the saw, wherein the second

sensor detects movement of the saw in the horizontal plane and  
a second actuator coupled to the second sensor and the  
second screw, wherein the second actuator rotates the second  
screw in response to detection by the second sensor of movement  
of the saw in the horizontal plane.

31. An apparatus comprising:

7342  
a table having a surface for placing a workpiece thereon,  
a saw having a saw blade,  
a support arm coupled to the saw,  
a holder connected to the support arm,  
a shaft slidably received within the holder and  
a hinge connecting the holder to the saw, the hinge  
permitting vertical pivotal movement of the saw relative to the  
shaft,

a first lock coupled to the holder and being operable to  
automatically prevent horizontal movement of the saw when the  
saw is pivotally moving in the vertical plane and

a second lock coupled to the hinge and being operable to  
automatically prevent vertical pivotal movement of the saw when  
the saw is moving in the horizontal plane.

32. An apparatus as in claim 31 further comprising:

a first screw disposed within the first lock,

7340-2  
Conrad

a first sensor disposed on the saw, wherein the first sensor detects pivotal movement of the saw in the vertical plane,

a first solenoid coupled to the first sensor and the first screw, wherein the first solenoid rotates the first screw in response to detection by the first sensor of pivotal movement of the saw in the vertical plane, thereby causing the first screw to abut against the shaft and prevent horizontal movement of the slide shaft,

a flange coupled to the hinge,

a second screw disposed within the second lock,

a second sensor disposed on the saw, wherein the second sensor detects movement of the saw in the horizontal plane and

a second solenoid coupled to the second sensor and the second screw, wherein the second solenoid rotates the second screw in response to detection by the second sensor of movement of the saw in the horizontal plane, thereby causing the second screw to abut against the flange and prevent vertical pivotal movement of the saw.

#### REMARKS

The Office Action dated December 21, 1999, has been received and carefully reviewed.

A number of formal objections and rejections were raised